ABSTRACT

A network distributed seismic data acquisition system comprises seismic receivers, connected to remote acquisition modules, receiver lines, line tap units, base lines, central recording system and a seismic source event generation unit. Global positioning system receivers of full or partial capability are combined with some of these modules and units and a master global positioning receiver aids the distributed receivers. The global positioning receivers may be used to synchronize high precision clocks as well as to provide positioning information. A master clock is designated and one or more high precision clocks is added to the network to correct for timing uncertainty associated with propagation of commands through the network. Seismic receivers and seismic sources are thereby synchronized with greater accuracy than otherwise possible, thus enabling an improvement in subsurface geologic imaging.